UND OFFICE OF SAFETY
UNIVERSITY OF NORTH DAKOTA

APPLICATION FOR AUTHORIZATION TO POSSESS AND USE RADIOACTIVE MATERIAL

INSTRUCTIONS: Detailed instructions are included at the end of this form. The completed form must be forwarded to the Radiation Safety Officer. Those seeking authorization should be familiar with the requirements of the Radiation Safety Handbook of the University of North Dakota that is available from the Safety & Environmental Health Office.

Department: _____

1. **Name of Authorized User (individual who will supervise):** _____
   Title of Authorized User: _____
   Telephone Number(s) of Authorized User: (office) _____ **(cell)** _____
   Building where radioactive material(s) will be used: _____

2. **Individual Worker(s) Using Radioactive Material(s) (please enter all information in table below):**

Worker Name	UND Title	Building Name	Room No.	Telephone No.

3. **Radioactive Material(s) To Be Used (please enter all information in table below):**

Isotope Name	Physical Form	Maximum Amount	Manufacturer	Model	Lab Room Number

4. **Proposed Use:** Please submit a detailed protocol for the research project or proposed use of the radioactive material(s) including each/all radioisotope(s) and the specific location where work will be conducted for each/all radioisotope(s).

4a. Additional Authorization: This application applies only to the use of radioactive material(s). Additional authorization may be required. Please ensure that any of the following authorizations have been obtained as required.

COMPLIANCE COMMITTEES	INDIVIDUAL COMMITTEE QUESTIONS	YES	NO
Use Committee (IACUC)	Does the proposed use include animals?	☐	☐
	Applied for approval from the IACUC?	☐	☐
Institutional Biosafety Committee (IBC)	Does the proposed use include recombinant DNA or biohazards materials?	☐	☐
	Applied for approval from the IBC?	☐	☐
Institutional Review Board (IRB)	Does the proposed use include human subjects or human cell lines?	☐	☐
	Is IRB approval required for this use?	☐	☐
	Applied for IRB approval?	☐	☐

5. **Are there other hazards associated with the use of this material (i.e. pathogenic, toxic chemical, etc…)?** ☐ Yes (If Yes, please list hazards below) ☐ No

6. **User Qualifications**

Training and Experience:

Type of Training	Name and Location of Training Entity	Duration of Training	On-the-Job Training	Formal College Training
			Select	Select
			Select	Select
			Select	Select
			Select	Select

Experience (Hands-On): ☐ **Yes (If Yes, Please list isotopes used and amounts below)** ☐ **No**

Where was experience gained?

Entity Name	Entity Address	Entity Telephone Number

7. Radiation Detection Instrumentation:

Type of Instrument(s) to be used (Make, Model #, & Serial # of each instrument)	Number Available	Radiation Detected	Sensitivity Range (mR/hr)	Window Thickness (mg/cm2)	Use of Instrument

8. Available Laboratory Facilities:

What UND building and room number will radioactive material shipments be delivered to?	
What UND building and room number will radioactive material(s) be stored in?	
What UND building and room number will animals be housed (if applicable)?	
What UND building and room number will animal tissue be stored in freezer(s)?	
What UND building and room number will chemistry be performed in?	
What UND building and room number will the radioactive material be used and/or handled in?	
What UND building and room number will radioactive waste disposal drum(s) be located and stored in?	

Describe below available storage facilities including methods used to ensure security of radioactive material(s):

Check special equipment and facilities used to control external and internal radiation exposure (Check all that appy):

☐ Fume Hood ☐ Transportation Container

☐ Glove Box ☐ Shield Storage Container

☐ Special Sinks, Drain Lines, & Exhaust Lines (please describe separately below):

9. Personnel Monitoring Procedures and Radiation Protection Program:

(See Section III, and RSP 2: "Radiation Monitoring Requirements and Dose Limits" of the Radiation Safety Handbook)

Check items to be used to control/monitor external and internal radiation exposure (Check all that apply):

☐ Shielding ☐ Protective Gloves

☐ Handling Tongs ☐ Labcoat

☐ Trays ☐ Radiation Signs & Labels

☐ Mechanical Pipettes ☐ Film Badges (to be ordered by the RSO)

☐ Dosimeters (Sensitivity Range) _____

10. Waste Disposal Techniques:

(See RSP 5: "Radioactive Waste Management and Disposal" of the Radiation Safety Handbook)

Are unusual waste disposal problems anticipated? (i.e. volatile, explosive or corrosive waste)

☐ Yes (If Yes, please list below) ☐ No

On a supplemental sheet, applicants will specify isotopes, estimated annual activity, physical state, and disposal methods for all radioactive wasted generated under this authorization.

11. Emergency Plan:

Each applicant will include an emergency plan describing the special precautions, if any, necessary for the correction of emergencies described in Section VI of the Radiation Safety Handbook. If the loss of electrical power or the loss of water could pose a radiation safety problem, then corrections of these problems must be discussed.

For questions or assistance, please email derek.gosselin@und.edu or call 701.777.3341

Printed name and title of individual completing this application:

Electronic Signature and Date: (*Note:* Once this form has been electronically signed, no changes are allowed to be made to this form)

To SUBMIT this form via email:

Click on this email address link: derek.gosselin@und.edu and attach a saved copy of this form to the email - the saved copy will be your copy to retain for your records

UNIVERSITY OF NORTH DAKOTA

Instructions for UND-RSP-1 Application for Authorization to Possess and Use Radioactive Material

***** Numbers 1-11 correspond with section on Form UND-RSP-1.**

1. **Name of Authorized User** - Identify the authorized user (individual to whom the authorization will be issued), and the building where the material will be used.

2. **Individual Worker(s) Using Material -** Identify all individuals that will be using radioactive material while working for the authorized user.

3. **Radioactive Material to be Used** -All applicants must list the radioactive materials to be used including element, mass number, maximum activity of each isotope, total activity of all isotopes on hand at one time, and chemical and physical form of each isotope. Specify whether material is in the form of a sealed source, include the make and model number of the storage container and/or device in which the source will be stored and/or used and the maximum activity per source. The need for the quantity requested should be justified.

4. **Proposed Use of Radioactive Material** -State the proposed use of the radioactive material and if it will be used in an especially hazardous form. If radioactive material is used for *in vivo* experiments, clearly explain in section 7.g. how you will handle animal waste, bedding, food and corpse(s) to prevent excess radiation exposure of personnel.

4a. **Additional Authorizations** -If the proposed use involves animals, recombinant DNA or other biohazardous material, or is related to human subjects, then approvals may have to be obtained from other compliance committees. This application only covers the use of radioactive material. Indicate if the use falls under the jurisdiction of any other compliance committees and if so indicate that a request for approval has been submitted to the appropriate committees.

5. **Are there other hazards associated with the use of this material? -** Indicate any non-radioactive hazards that the material presents such as pathogenic, or toxic chemical.

6. **Qualifications of the User** -All applications must list the name and qualifications of the proposed authorized user(s) including all the information required on Form UND-RSP-l. Technically competent individuals who have never worked with radioactive materials must provide evidence of an experienced collaborator.

7. **Available Radiation Detection Instruments** -All applicants must list the detection equipment available to the users. The list will include any survey meters and wipe test counters such as liquid scintillation or gamma counters.

8. **Available Laboratory Facilities -**All applicants must list the facilities where radioisotopes will be used including:
    a. Building and room numbers.
    b. Available hoods, glove boxes, special sinks, drain lines and exhaust lines.
    c. Security (RSP 3: “Security of Sources of Radiation” in the Radiation Safety Handbook)

9. **Personnel Monitoring Procedures and Radiation Protection Program -**All applicants must list the following items:
    a. Film badges used including name of supplier (Contact the RSO for information on the current University film badge policy).

b. Dosimeters used. Specify radiation detected and sensitivity range.
c. Bioassay procedures. If required, specify procedures such as urine analysis, whole body counting, and breath analysis. Specify frequency of assay and vendor. If performed by the applicant, specify the sensitivity of the test.
d. Control measures including access control, automatic alarm systems, labeling, written operating and emergency procedures, area surveys and monitoring, etc.
e. Each user engaged in activities which could cause contamination of facilities will submit a plan for limiting the contaminated areas and equipment through the use of hoods, glove boxes, protective clothing, gloves, stainless steel trays, absorbent paper and surface coverings.
f. Procedures involving highly volatile substances (e.g. iodination involving volatile forms of iodine-I25 or I31) may lead to concentrations in effluents to unrestricted areas in excess of those specified in 33-10-04.1 of the North Dakota Department of Health's Rules. Applications for use of such must detail the special procedures which will be employed to reduce the concentration in effluents. The use of filtered hoods (e.g. charcoal filter for iodine) sealed reaction vials, glove boxes, etc. will be considered appropriate.
g. If your research program involves the use of animals, plants, or microorganisms describe the housing facilities. Furnish a copy of the instructions given to the caretakers for the handling of organisms, for waste, for carcasses, and for cleaning and decontamination of facilities, cages, or containers. Also include procedures describing how laboratory rooms will be secured unless attended by authorized users of radioactive material.
h. If your program includes use of radioactive materials for teaching or demonstrations in academic courses, give the approximate number of students anticipated, isotopes and quantity limitations to be handled per student, health and safety instructions for students and the extent to which students will be handling radioisotopes

10. **Waste Disposal Techniques (RSP 5: "Radioactive Waste Management and Disposal" in the Radiation Safety Handbook) -**All applicants will list the techniques employed in disposing of radioactive waste including the following:
    a. **Solid Waste** - Specify isotopes and disposal methods including methods employed for animal carcasses. Specify estimated annual disposal amounts (in microcuries). Disposal of volatile substances in breakable containers is prohibited. The applicant must state the technique utilized to convert unused portions of the volatile material to a nonvolatile form before disposal.
    b. **Liquid Waste** -Specify type of isotope, total amounts and concentrations of waste that meets the State Health Department's definition which "is readily soluble, or is readily dispersible biological material, in water", for disposal in the sanitary sewer system. Specify disposition of waste that can't be disposed of in the sewer. Estimate annual amounts of both (in microcuries).
    c. **Gaseous Waste -**Specify type of isotope, concentrations, total amount (in microcuries) and disposal method. Where hoods are used, specify face velocity, volumetric flow rate, filters, monitoring, and exhaust points. When working with extremely volatile substances, such as some forms of iodine, specify methods used to prevent releases greater than maximum permissible concentration.

11. **Emergency Plan (Section VI-Radiation Safety Handbook) -**Each application will include an emergency plan describing the special precautions, if any, necessary for the correction of emergencies described in Section VI. If the loss of electrical power or the loss of water could pose a radiation safety problem, then corrections of these problems must also be discussed.